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BY EMAIL AND RESS

January 21, 2022

Ms. Nancy Marconi
Acting Registrar
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Marconi:

EB-2021-0117 – Revised Proposed Amendments to the Distribution System Code to Facilitate the Connection of Distributed Energy Resources

On December 20, 2021, the Ontario Energy Board ("Board" or "OEB") issued a Notice of Revised Proposal (the "Revised Proposal") that included revisions to initial Distribution System Code (DSC) amendments proposed by the Board in its Notice of Proposal, dated August 5, 2021 (the "Initial Proposal"). These revisions are intended to further clarify the rules and ensure that appropriate processes are established for connecting distributed energy resources (DER) to an electricity distributor's system.

In issuing its Revised Proposal, the Board has considered the input, insights and comments provided by stakeholders in response to the Initial Proposal. Hydro One Networks Inc. ("Hydro One") firmly believes that, as DER solutions are increasingly adopted, a regulatory framework is needed that will enable all types of DER projects to be assessed and connected in a safe, efficient and predictable manner. This framework must also provide sufficient flexibility to be able to adapt to changes in DER adoption. Through the DER Connection Working Group, the Board will need to rely on the input from stakeholders to understand DER connection issues that may arise and commit to evolve the regulatory framework, as required, to facilitate appropriate outcomes.

Hydro One supports the revisions contained in the Revised Proposal but continues to believe that additional revisions are required at this stage of the Board's review to clarify and address identified issues related to the DER connection framework and process. Please refer to the attachment for our written comments.

If you have any additional questions regarding Hydro One's comments or would like to discuss these comments in further detail, please contact Jason Savulak by phone at 647-293-7226 or by email at RegulatoryAffairs@hydroone.com.

Sincerely,

Frank D'Andrea

Attachment – Hydro One's Comments

On September 16, 2021, Hydro One submitted comments in response to the proposed DSC amendments contained in the Initial Proposal, which included the newly established Distributed Energy Resource Connection Procedures (DERCP) document and template forms that support the DERCP. Hydro One has reviewed the Board's Revised Proposal and notes that the Board has revised several of the initial proposed amendments and supporting documents in response to comments received from stakeholders, including many of those from Hydro One.

Nonetheless, Hydro One is submitting the following comments in response to items that warrant further consideration. Part 1 focuses on those revisions made by the Board where Hydro One believes that further clarification, review or modification is still required to streamline the connection process and effectively connect DERs to the distribution system. In Part 2, Hydro One would like to call attention to certain comments made by Hydro One in response to the Initial Proposal that were not acknowledged or addressed by the Board. Lastly, Part 3 highlights other matters that require further clarification as a result of certain statements made by the Board in the Revised Proposal.

Part 1 – Revisions that Require Further Clarification, Review or Modification

1. Definition of a DER and Use of the Term

In response to stakeholder comments, the Board has decided to establish a stand-alone definition for a DER, which is defined within the DERCP but not in the DSC. The Board has chosen to define a DER as follows:

Distributed Energy Resource (DER) means, for the purposes of the DERCP, an electricity source or load that is connected to a distribution system, typically through a connection on the customer-side of an ownership demarcation point. Sources generate electricity (e.g. a generation facility, including an energy storage facility when discharging), while loads do not generate electricity (e.g. an energy storage facility when charging).

Hydro One does not support the proposed DER definition or the Board's decision to use the term only within the DERCP. First, the proposed definition is confusing and the first sentence would seem to imply that all loads are DERs, which would not be correct. In Hydro One's view, a load facility would qualify as a DER connection only if the electric power withdrawn from the distribution system by the load facility can be altered by the operation of generation or storage facility connected to load customer's facilities. For clarity and simplicity, load facilities whose demand can be controlled through other types of demand response or energy efficiency actions should not be classified as a DER. Hydro One recommends that the Board consider the following definition for a DER:

Distributed Energy Resource (DER) means a generation or storage facility connected to the distribution system or a load facility connected to the distribution system that can modify the flow of electric power at its point of connection through the operation of a generation or storage facility.

Second, Hydro One seeks to understand why the Board has elected not to include the definition of a DER in the DSC and not to amend the requirements in Section 6.2 to now be applicable to DERs. When the Board initiated its review of the requirements and process for connecting DERs, one of its objectives was to expand the applicability of the requirements in Section 6.2 of the DSC to provide clear rules and requirements for connecting all types of DER facilities. However, based on the Revised Proposal, the Board has refrained from using the DER term more broadly or replacing the term generation facility with DER, where appropriate, within the DSC and the DERCP. Hydro One would like to better understand why the Board has opted to maintain the existing use of the term generation facility in Section 6.2 to reference and include facilities that would be more appropriately defined as DERs. If the intention is for the requirements in Section 6.2 to apply to facilities that are not simply generation facilities, this should be clearly expressed to avoid causing potential confusion regarding the applicability of this section.

2. Cost Responsibility Rules for the Connection of Generation and Storage Facilities

In its Revised Proposal, the Board states that it has revised Section 6.2.31 to clarify that Chapter 3 of the DSC applies to both exporting and non-exporting DER facilities. However, this is not clear when requirement 6.2.31 specifically states that Chapter 3 applies to facilities "connecting to a distributor's distribution system." As proposed, this would seem to exempt generation and storage facilities connected behind the meter of a load facility, which are connected to the customer's facilities and not the distribution system.

Furthermore, a requirement clarifying the cost responsibility rules for generation and storage facility connections should reside in the section in which these rules apply. Hydro One recommends that a requirement similar to requirement 3.0 be added to Chapter 3. The requirement should state the following:

3.0A For the purposes of section 3 of this Code, the reference to a generation facility includes both an exporting and non-exporting connection. The reference to a generation facility in this section is also deemed to include a storage facility.

While the Board has intended to clarify the applicability of the cost responsibility rules to all types of generation and storage facilities, the Board has not indicated how the cost responsibility rules in Chapter 3 would actually apply to different types of DER facilities that are not generation facilities. In the Revised Proposal, the Board has stated that a storage facility can act as both a load and a generator. However, the Board should clarify how the cost responsibility rules in Chapter 3 would apply when assessing the connection of a storage facility. For instance, should a distributor assess the load and generation function

of a storage facility separately when determining the facility's connection costs? Or should a distributor assess the facility's connection costs as either a load or a generator?

Similarly, if the installation of a behind the meter connected generation or storage facility reduces the load consumed at a new or existing facility connection or shifts the demand off-peak, how should the loss in distribution and transmission revenue from the load customer be addressed? Currently, Section 3.5 of the DSC prevents a distributor from collecting bypass compensation from the load customer in many of these situations, which results in these costs being shifted to other ratepayers.

3. Requirement to Publish a Restricted Feeder List

In its Revised Proposal, the Board has proposed to amend Section 6.2.3 to require distributors to make available "a list of *restricted feeders* by name and feeder designation that the distributor operates that are known not to have any short circuit capacity to accommodate a generation facility connection." A *restricted feeder* has been defined as "any feeder owned by the distributor that has no additional short circuit capacity for connection of generation facilities even if the constraint is caused by an upstream asset that it does not own."

In principle, there could be value in explicitly identifying those feeders that are restricted due to short circuit capacity, which would likely make any proposed connection to these feeders infeasible from a cost perspective. However, Hydro One, who is a member of the Working Group, cannot find any specific record of stakeholders specifically requesting a published list of feeders that are restricted for this reason; moreover, stakeholders had sought a list of all feeders that have no additional capacity to connect additional DER facilities. Hydro One's concern with the proposed amendments is that it could mislead and give DER proponents the false impression that if a feeder does not appear on the restricted feeder list, there should be available capacity to connect a DER facility. There could be other reasons that could also cause a feeder to be restricted and it should be made clear to DER proponents that the list of restricted feeders is not an exhaustive list of all feeders that are restricted. To avoid creating additional confusion, Hydro One still believes that the restricted feeder list should include all feeders that are known to have restrictions. If a proponent remains interested in connecting to a feeder on this list, there would be nothing preventing them from contacting the distributor to obtain further information regarding the restriction.

4. Connection Process Requirements for a Small, Mid-Sized or Large Generation Facility

For consistency, Sections 6.2.12 and 6.2.13 should both reference the need to follow the process set out in the DERCP. As mentioned in Hydro One's response to the Initial Proposal, this would eliminate the need for Section 6.2.23. Furthermore, the Board should specify the timelines for performing a connection impact assessment under both Sections 6.2.12 and 6.2.13 or not at all.

5. DERCP – Connection Impact Assessments (Section 5.1 – Table 1)

The Board has revised Table 1 in Section 5 of the DERCP but the table still contains errors that could create confusion for DER proponents. Hydro One would like to reiterate that for all DER project connections, with the exception of micro-embedded projects, a Transmitter study is required. Therefore, Table 1 should be revised to indicate that a Transmitter study is required for Small DER projects and the Board should remove "if applicable" for the Transmitter study requirement.

6. DERCP – Project Cost Estimates and Option to Request a Detailed Estimate (Section 5.1.4 and 6.4)

In the Revised Proposal, the Board has stated that cost estimate matters relating to DER project connections need to be reviewed further by the Working Group and that the Board will revert back to the original language in Section 6.2.16 of the DSC for the time being. Hydro One agrees with the Board's decision to defer cost estimate matters back to the Working Group for further review as these matters require further discussion and assessment.

However, while the Board may have intended to leave requirements relating to cost estimates unchanged, certain statements made in the DERCP have altered these requirements and may inadvertently create further confusion. Hydro One would like to note the following:

- On page 10 of the DERCP, under the section 'Detailed Cost Estimate', the Board states that "*A more detailed cost estimate based on the location and size of the project is prepared at the applicant's expense as part of the Connection Cost Agreement.*" Respectfully, this statement is incorrect and should be deleted. A detailed cost estimate is not prepared based on the location and size of the project and is subject to the terms agreed to between the distributor and the DER project applicant. A detailed estimate is prepared based on other details that are reviewed by the distributors. Furthermore, a detailed cost estimate is not prepared as part of the Connection Cost Agreement and is a separate agreement. In the next sentence, the reference to 'connection agreement' should be changed to 'Connection Cost Agreement'. Lastly, the outcome of a CIA includes the technical requirements of the connection and an estimate of costs for Small projects only. The DSC does not currently specify any requirements for providing an estimate to the applicant of a Mid-Sized or Large DER project when the CIA is issued, unless a request for a detailed cost estimate is made by the applicant.

- Section 5.1.4 should clearly state that the ability to request a more detailed cost estimate only applies for Mid-Sized and Large DER projects. The DSC currently requires distributors to provide a detailed cost estimate for Small projects. This is not currently feasible. There is no requirement in the DSC that enables the applicant of Small DER project to request a more detailed estimate.

- Section 6.4 should be deleted as it is redundant.

7. DERCP – Connection Process for Small Embedded Generation Facilities

The flowchart in Figure 4 of Section 5.6 of the DERCP illustrates the Connection Impact Assessment Process for a Small embedded generation facility. Hydro One would like to reiterate that the flowchart (including the steps that describe the connection process) should show the steps that must be followed for the scenario where the proposed facility is connecting to an embedded distributor's system and the host-distributor must perform a CIA. By not capturing this potential scenario, the process depicted by the flowchart is inconsistent with the requirements specified in the DERCP. Any inconsistency between the flowchart and the requirements in the DERCP has the potential to create further confusion for DER proponents and cause misunderstandings regarding the process.

8. DERCP – Connection Process for Mid-Sized and Large Embedded Generation Facilities

The revision made to Section 5.7 of the DERCP should be revised as noted below:

In any case, the distributor is responsible for finishing its review within 60 days of the application being substantially complete for mid-sized embedded generation facilities and within 90 days of the application being substantially complete for large embedded generation facilities ~~or facilities requiring a distribution system reinforcement or expansion~~.

The DSC does not currently allocate additional time for the distributor to perform a CIA where a system reinforcement or expansion is required to connect a mid-sized or large embedded generation facility. This is due to the fact the current DSC requirements do not require a distributor to provide a cost estimate for these types of project connections when issuing the CIA. Although the Board has indicated that requirements related to the provision of cost estimates for DER project connections will be deferred to the next phase of its review of the DER connection process, Hydro One would like to note that any changes in this regard could necessitate a change to these timelines.

9. DERCP – DER Project Applications Requiring a Connection Impact Assessment from a Host-Distributor

In the Revised Proposal, the Board has amended the DSC and updated the DERCP to increase the prescribed 60 and 90 day timelines for issuing a CIA by 15 days for the scenario where a host-distributor CIA must be performed. However, the Board was not persuaded that the distributor who receives the CIA application (the "receiving distributor) should be provided with an additional 5 days, as requested by some stakeholders, to issue the complete CIA document package (which includes the study assessments, offer to connect and estimates) to the DER project applicant.

Hydro One agrees with and supports the Board's proposed revisions to increase the CIA timelines for the scenario where a host-distributor CIA must be performed. That notwithstanding, the Board should reconsider providing the receiving distributor with an additional 5 days to coordinate the submission of

the CIA documents to the DER project applicant. If no additional coordination time is provided, receiving distributors are unlikely to comply with the CIA timelines whenever a host-distributor CIA is required.

The reason that the receiving distributor will be non-compliant can be explained as follows: if the receiving distributor provides the necessary information to the host-distributor on Day 15 following the receipt of a complete CIA application to connect a Small DER project (assuming no expansion is required) and the host-distributor takes 60 days to perform their CIA, this will leave no time for the receiving distributor to coordinate and issue the CIA documents to the DER project applicant by Day 75. For the receiving distributor to comply with the new proposed CIA timelines, they will need to provide the necessary information to the host-distributor before Day 15 and hope that the host-distributor completes their CIA in less than 60 days. If no coordination time is provided, Hydro One believes that this will become a nuisance issue for both receiving distributors and DER project applicants if receiving distributors cannot comply with the new established CIA timelines. Hydro One strongly recommends providing an additional 5 days to the receiving distributor for coordination time.

10. Application for Micro-Embedded Generation Facility (Section 6.2.5)

Hydro One does not agree with the proposed revisions to Section 6.2.5 of the DSC that require a Micro-Embedded Generation Facility applicant to use the Micro-Embedded Generation Facility Agreement in Appendix E of the DSC as the application form. It is Hydro One's view that the agreement does not constitute an application and will only create confusion for applicants.

Furthermore, Hydro One requires additional information, beyond what is specified in the agreement, to process a Micro-Embedded Generation Facility application and would like to continue using its existing Micro-Embedded Generation Facility application form. Lastly, Hydro One does not recall having any discussions at the Working Group level with respect to the requirements for the Micro-Embedded Generation Facility application form and believes this requires further discussion before proposing changes.

Part 2 – Hydro One Comments in Response to the Initial Proposal that were Not Acknowledged or Addressed

Based on our review of the Revised Proposal, the Board rejected or did not address several comments and revisions submitted by Hydro One in response to the Initial Proposal. While Hydro One accepts the Board's decision not to make further changes in response to certain comments and suggested revisions, Hydro One respectfully requests the Board to reconsider the recommendations below, which we continue to strongly believe are important in clarifying and improving the effectiveness of the DER connection process.

1. Connection Agreements

Section 6.2.22 of the DSC and Section 6.1 of the DERCP require distributors to enter into standard form agreements with embedded generation facilities, as set out in Appendix E of the DSC. Hydro One submitted two comments in its response to the Initial Proposal regarding the standard form connection agreements specified in Appendix E.

First, Hydro One indicated that, while these agreements remain appropriate for most embedded generation facility connections, certain requirements in these agreements may not be suitable or appropriate for addressing the operation of some DER connections, such as load displacement generation facilities, storage facilities or facilities that have flexible hosting capacity. The Board should clarify whether the existing provisions in the standard form agreements apply to all types of DERs and whether a distributor has flexibility to modify the provisions of the standard form agreement, as it sees fit, to address specific characteristics of a DER project's connection or operation that may not be permitted under the current standard form agreements. If the Board could confirm whether a distributor has the ability to modify certain aspects of the standard form agreement in Appendix E of the DSC, where required, this would improve the efficiency of the connection process for DER projects and avoid unnecessary connection delays.

Second, Hydro One indicated that the specified Micro-Embedded Generation Facilities Application form in Appendix E has not been updated since it was first established. This form should be reviewed to determine whether the provisions in the form remain relevant and if they should apply to all micro-embedded DER connections, including energy storage facilities. In addition, Hydro One had noted that the form's technical requirements are significantly out of date and should be updated to align with the CSA C22.3 No. 9 standard.

2. Requirements for Collecting Additional Capacity Allocation Deposits

Hydro One and other stakeholders had questioned the appropriateness of the requirements in Section 6.2.18 (b) and (c) of the DSC, which relate to the collection of additional capacity allocation deposits by the distributors in certain instances. Some stakeholders recommended that these requirements be deleted. In its Revised Proposal, the Board disagreed with stakeholder comments and the requirements were maintained as follows:

6.2.18 (b) applies only to an exporting generation facility if the applicant does not have an executed ~~OPA~~ IESO contract which includes a requirement for security deposits or similar payments, a requirement that the applicant pay a capacity allocation deposit equal to $20,000 per MW of capacity of the embedded generation facility at the time the connection cost agreement is executed;

(c) applies only to an exporting generation facility if the applicant does not have an executed ~~OPA~~ IESO contract which includes a requirement for additional security deposits or similar payments, a requirement that if fifteen (15) calendar months following the execution of the connection cost agreement the embedded generation facility is not connected to the distributor's distribution system, the applicant must pay an additional capacity allocation deposit equal to $20,000 per MW of capacity of the embedded generation facility on the first day of the sixteenth(16th) calendar month following the execution of the connection cost agreement;

The Board should be aware that, as stated, Section 6.2.18 (b) would require distributors to collect additional capacity allocation deposits from any proponent applying to connect a net-metering generation facility, since a net-metering generation facility is an exporting generation facility. Hydro One does not believe this is appropriate.

Originally, Section 6.2.18 (b) and (c) were established to support the previous Ontario government's large scale procurement program for connecting renewable generation to the grid, which has since transitioned to a net-metering program. Since contracts are no longer being offered by the IESO to connect DER-type facilities to the grid, these requirements are no longer applicable and should be deleted. The Board has stated that Section 6.2.18 (c) would deter "queue squatting" for exporting connections. Hydro One disagrees with this statement and contends that Section 6.2.18 (c) is actually placing an upper limit on the in-service date that conflicts with other requirements related to connection timelines. There have been no discussions at the Working Group level as to whether the upper limit imposed by 6.2.18 (c) is appropriate or whether it should apply to all DER projects.

3. DERCP - Micro-Embedded Generation Facility Connection Process

The current requirements in Section 6.2.6 of the DSC for connecting a micro-embedded generation facility do not permit distributors to charge micro-embedded generation facility applicants for the preparation of an offer to connect, except where a site assessment is required. These rules were created to expedite the connection process and reduce connection costs for micro-embedded generation facilities. Furthermore, when these rules were established, there were few known capacity constraints on the system restricting the connection of micro-embedded generation facilities.

With a significant amount of renewable generation now connected to the system, there is less available capacity on the system and a study would be required to determine if a micro-embedded generation facility project could be permitted to connect to a constrained feeder. In its response to the Initial Proposal, Hydro One requested that distributors be provided with the additional flexibility to be able to perform a study in such scenarios. The Board rejected this recommendation on the basis that it did not believe this to be a significant issue. Hydro One would like to confirm that it has received escalations involving this type of scenario from proponents who have expressed frustration with this limitation. Hydro One continues to believe that, in addition to being able to perform a site assessment when necessary, distributors should also be provided with the ability to study whether a micro-embedded generation facility could be connected to a constrained feeder.

Part 3 – Additional Comments in Response to the Revised Proposal

1. Relationship between DSC and DERCP

In the Revised Proposal, the Board states that "the DERCP does not form part of the DSC and is not subject to the requirements of section 70.2 of *the OEB Act*." Furthermore, in the Initial Proposal, the Board has stated that "by moving to a DERCP, the OEB will be able to more nimbly address changes in the sector and provide more flexibility to distributors and proponents as DERs play a greater role in the distribution system. Unique distributor issues may also be addressed more readily by moving to a procedure document rather than DSC-based rules."

Hydro One understands and supports the Board's decision to migrate certain procedural requirements and details of the DER connection process from the DSC to the DERCP. That notwithstanding, Hydro One views the DERCP document as an extension of the DSC requirements. Therefore, distributors will be expected to comply with the DERCP requirements and any changes made to the DERCP will still need to be appropriately stakeholdered, albeit this process may not follow the same process required to amend a code.

The Board seems to imply that changes to the DERCP could be made more easily. This suggests that the Board intends to update or amend the DERCP without a public notice procedure on the basis that the DERCP is not part of the DSC. Hydro One requests that the Board further clarify the relationship between

the DSC and the DERCP and how it plans to update the DERCP in the future.

2. Capacity Allocation Exempt (CAE) Generation Facilities

In the Revised Proposal, the Board has made statements that allude to the fact that capacity allocation exempt (CAE) generation facilities will continue to be processed on an "as and when received" basis in accordance with DSC Section 6.2.4.2 and are not subject to the capacity allocation process in Section 6.2.4.1. Hydro One would like make the Board aware that it is not feasible or practical for distributors to treat CAE generation facilities in a manner that would exempt them from being subject to the normal capacity allocation process. In fact, when the feed-in tariff (FIT) program existed, it was apparent early on that Hydro One (and other distributors) would need to study all Small embedded generation facility connection applications to ensure that they can be connected without impacting the safe and reliable operation of the distribution system. As a result, the CAE requirements in the DSC have always been somewhat problematic and impractical to implement because of the need to study and assess all generation connections to the system. Hydro One is therefore recommending that the reference in Section 6.2.4.2 to CAE generation facilities be removed. Similarly, Sections 6.2.8A, 6.2.8B and the last sentence of Section 6.2.12 of the DSC should also be deleted as they are no longer relevant.